

Instruction Book

DeLaval swinging cow brush



CD27049





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EC Declaration of Conformity

Name of product: DeLaval swinging cow brush
Type:

Other identifying data: article no (230 V) 91526201
(110 V) 91526202

The product complies with requirements of the following directives:

98/37/EC

Harmonized standards which have been used:

EN 292
EN 60204
EN 1050
EN 5509
EN 60439

Date: 2003-09-18

Signed:

A handwritten signature in black ink, appearing to read 'Göran Karlsson'.

Name: Göran
Position: Karlsson
Director
Product Area Farm Supply & Barn Equipment

Name and address of manufacturer:
DeLaval International AB
P.O. Box 39, SE-147 21 Tumba, Sweden

Name and address of agent:





DeLaval swinging cow brush

Safety precautions

DeLaval swinging cow brush

Safety precautions

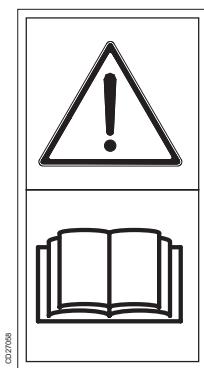
Follow the instructions in this user manual with regards to safety, use and maintenance optimize. Keep this user manual within reach of the DeLaval swinging cow brush.

DeLaval is not legally responsible for damage and indirect damage due to operating errors, lack of correct maintenance and/or any way of use which is not described in this manual.

The responsibility of DeLaval expires as soon as you or any third party, without written agreement from DeLaval, executes any operation like adjustments or extensions to the function of the DeLaval swinging cow brush or its accessories.

DeLaval continuously strives for improvement of our physical products and offerings. DeLaval reserves the right to alter the specification shown without prior notice.

Note that despite following these safety precautions, caution should be applied in all usage situations to avoid injuries.

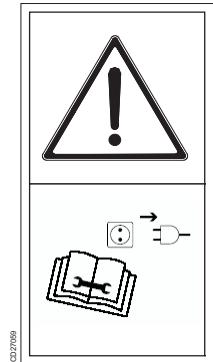


Warning! Read the user's manual of the DeLaval swinging cow brush in order to know how to position and mount the DeLaval swinging cow brush before starting operation.



DeLaval swinging cow brush

Safety precautions



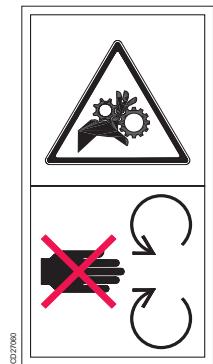
Warning! Before maintenance work:

1. Read and understand all the information contained in the operator's manual regarding maintaining, adjusting or cleaning the swinging cow brush.

2. Switch off the machine, shut down and lockout power supply, wait for all moving parts to stop.

Make sure the plug is taken out from the wall socket.

Make sure that no one else, by accident or due to misunderstanding, re-plugs the plug in the wall socket during maintenance work.



Warning! Danger for injuries if stuck between main part and shaft.



Warning! Danger for a serious injury by jamming. Always pull out the plug from the wall socket before dismantling the protective cover and maintaining the driving device.



Warning! Stay out of reach of the brush when it is switched on.



DeLaval swinging cow brush

Safety precautions



Warning! Danger for shortcuts. The electric connection must correspond to specification on the type plate. Cable diameter, safety fuse, earth connection etc. shall be in accordance with local requirements and be done by an authorized electrician.



Warning! Make sure other operators are informed about the safety precautions as well as installing procedure.



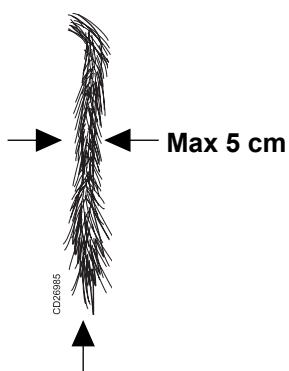
Warning! Loose hanging clothes should not be used when being close to the brush. Long hair should be protected.



Warning! Keep children away from the DeLaval swinging cow brush.



Warning! The DeLaval swinging cow brush may not be used by cows with longer hair than 5 cm (including tail hair). Hair length should be measured in all directions from the body and tail, see picture.



Caution! Using products which do not meet specified requirements, for example spare parts or fluids, or not appropriately trained personnel for your DeLaval product may void or limit the warranty.



DeLaval swinging cow brush

Safety precautions

Note! Take care that all warnings stickers are clearly visible. If they are not legible, they should be replaced.

Note! The DeLaval swinging cow brush may only be used for the purpose it is meant for, as described in chapter: General description.



Product data

DeLaval swinging cow brush

Product data

- The Delaval swinging cow brush is available in two executions:
 - a) Wall mounting (delivered as standard)
 - b) Post installation, for post diameters 2"-2.5", 3"-3.5" and 4".

The DeLaval swinging cow brush is not watertight and should be used indoors or under well protected roofs only.

Note! *Outdoor installation might cause shortcuts in electric installation.*

- The Delaval swinging cow brush is suitable for dairy cows over 1 year old.
- The Delaval swinging cow brush should not be used by animals with longer hair than 5 cm (including tail hair). For more information see under chapter Safety precautions.

Note! *The DeLaval swinging cow brush may only be used for above mentioned application. Any other application is strictly prohibited.*

After mounting the DeLaval swinging cow brush connect the mains supply and the DeLaval swinging cow brush is ready for operation. As soon as the cow pushes the brush, the brush starts automatically. When the cow leaves the brush, it will stop after approximately 10 seconds.

Technical data

Dimensions (LxWxH)		90x90x82 cm	(35 1/2" x 35 1/2" x 32 1/4")
Weight		35 kg	(77 lbs)
Voltage	91526201	230 V AC	
	91526202	110 V AC	
Power consumption		0.12 kW	



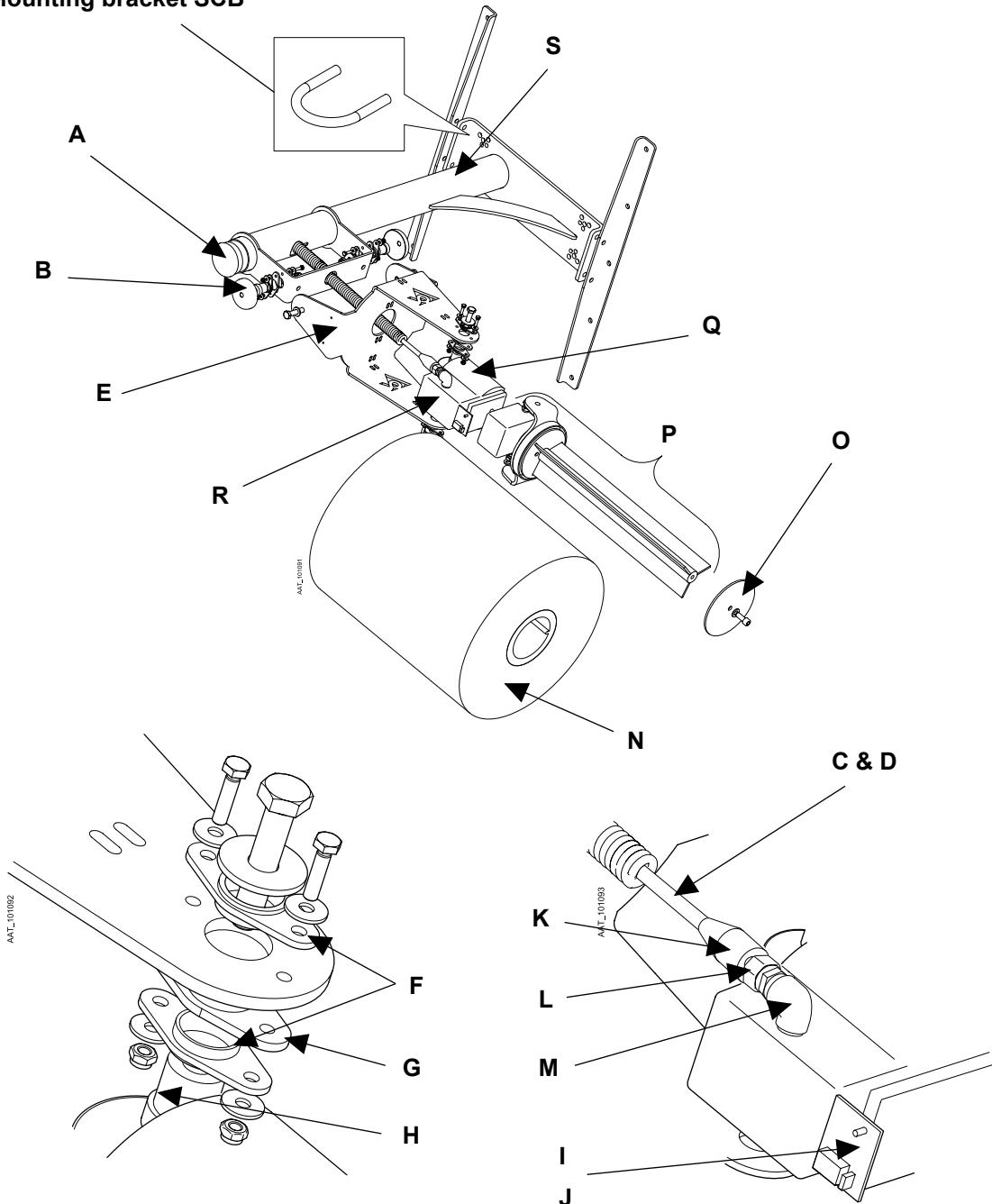
DeLaval swinging cow brush

Product data

Article numbers

See table on next page

Mounting bracket SCB





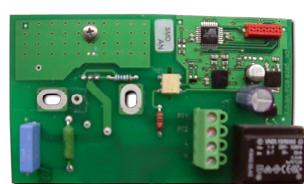
DeLaval swinging cow brush

Product data

	Article number	Description
	91526201	Swinging cow brush 230V complete
	91526202	Swinging cow brush 110V complete
Mounting bracket SCB	91526224	Post mounting bracket set SCB 2"
	91526225	Post mounting bracket set SCB 2.5"
	91526226	Post mounting bracket set SCB 3"
	91526227	Post mounting bracket set SCB 3.5"
	91526228	Post mounting bracket set SCB 4"
A	91526205	Synthetic hull 3"
B	91526246	Bearing protection SCB
C	91526243	Spiral cord SCB 220V
D	91526244	Spiral cord SCB 110V
E	91526235	Top leaning plate SCB v2.0
F	91526211	Synthetic bearing
G	91526212	Chim
H	91526210	Piston
I	91526253	SCB PCB - generation 2
J	91526249	SCB PCB - generation 1
K	91526237	Cable bite protection SCB v2.0
L	91526238	Cable screw gland SCB (UL/CSA)
M	91526245	Cable connection angle SCB (UL/CSA)
N	91526242	Brush cylinder SCB
O	91526254	Bottom plate kit
P	91526250	SCB gearbox+axle
Q	91526239	Motor incl PCB SCB v2.0
R	91526256	Top bearing motor
S	91526234	Mainframe complete SCB v2.0



I



J



DeLaval swinging cow brush

Product data



DeLaval swinging cow brush

Installation

General

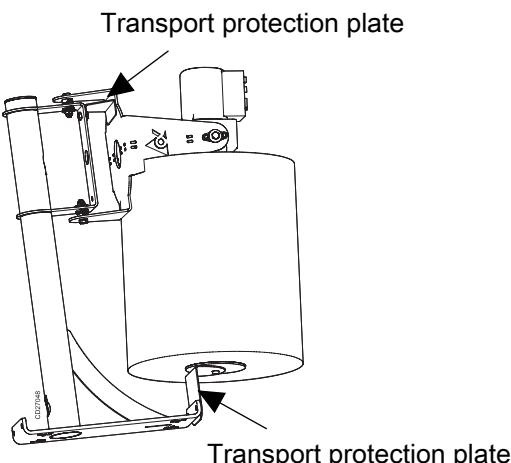
1. Installation must be performed by an authorized electrician.
2. Make sure the electrical connection fulfills the general and local requirements (Low voltage directive 73/23/EU and NEN 1010) and that it is within reach from the brush.
3. After installation, check that the DeLaval swinging cow brush runs smoothly. If not, switch off the mains connection immediately.

Transport

The brush is packed in a box and mounted on a pallet to protect the product during transport. For transportation and installation safety reasons two swing protection plates are mounted to the unit during transport, see picture.

Note! *These protection plates should be kept during installation but removed before brush is started.*

The weight of the complete brush including pallets is 58 kg (brush alone 35 kg). Use an elevator to move and lift the unit.



Unpacking and assembling

1. Open the packaging.
2. Mount the DeLaval swinging cow brush as required according to the instructions.



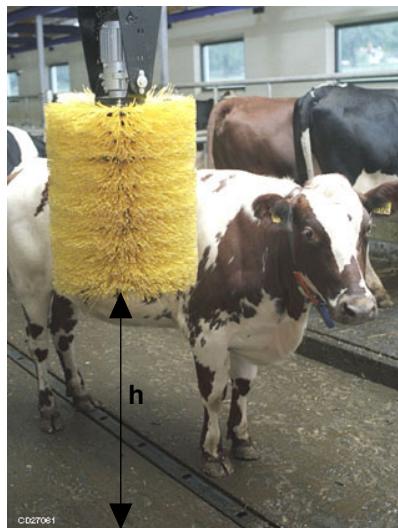
Wall installation

Note! The wall must be sufficiently strong. It should be comparable with a reinforced concrete wall.

For two persons working together, installation takes approximately 1 1/2 hour using a ladder and a rope (providing electricity connection is available). Use the provided mounting stencil as reference when mounting the brush on the wall.

1. Make sure that the wall is good enough for a stable installation of the DeLaval swinging cow brush on a wall.
2. Determine the position where the wall mounting bracket should be installed. For correct measurements, use the separate mounting stencil provided with the brush.
3. Determine the height of the wall mounting bracket before fixation.
4. The height of the DeLaval swinging cow brush is depending on the shoulder height of the cattle, average 100-115 cm (h) above the floor measured from the underside of the brush (see picture).
5. Mark the position of the four fixation holes on the wall, using the separate mounting stencil as reference.
6. Drill the 4 holes, dimensions 12 mm.
7. Mount the DeLaval swinging cow brush by means of thread ends. Use thread ends of sufficient length. The thread ends should have a length of the thickness of the wall plus ca. 70 mm.
8. Put the thread ends in the drilled holes and mount the DeLaval swinging cow brush.
9. Remove the swing protection plates (see picture in section Transport).

Note! About a week after mounting, the fixation should be controlled.





Post installation

Note! Preferably use a round steel post with a diameter of 10 cm (4"). The bar should be anchored at the top and bottom.



1. Mount the DeLaval swinging cow brush with the original fixation U-brackets including nuts.
2. Determine the height of the wall mounting bracket before fixation.
3. The height of the DeLaval swinging cow brush is depending on the shoulder height of the cattle, average 100-115 cm (h) above the floor measured from the underside of the brush (see Wall installation).
4. Fix the nuts carefully. Make sure that it shall not be possible to turn the DeLaval swinging cow brush around the post.
5. About a week after mounting the fixation should be controlled.



Electrical installation

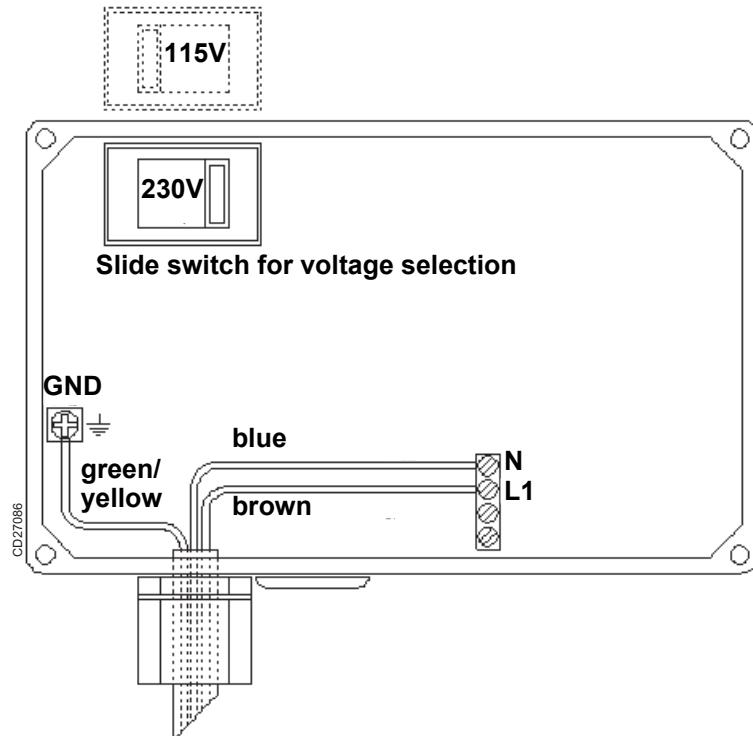
Electrical connection of the motor

The electrical connection of the DeLaval swinging cow brush may only be installed by an authorized electrician according to the requirements for NEN 1010.

Note! *The motor is protected against overload by means of a built in thermic protection. After cooling down of the motor, this thermic protection will automatically be reset.*

Note! *For safety reasons switch off the mains before starting any job at the electric installation.*

Wiring diagram





DeLaval swinging cow brush

Operation



Warning: Before carrying out any kind of operation, read the chapter "Safety precautions" carefully.

Switch on

Switch the brush on by installing the mains supply. The brush is now ready for use.

Switch off

The built in automatic stop function has a delayed stop which makes the brush rotate 10 seconds after it has reached its vertical position.



DeLaval swinging cow brush

Operation



DeLaval swinging cow brush

Maintenance

Note! Follow the safety precautions during maintenance work!

Note! Maintenance only to be executed by authorized persons.

- Disconnect the plug from the wall socket before starting maintenance work. For additional safety, remove the fuse from the main switchboard.
- Clean the DeLaval swinging cow brush carefully before starting maintenance.
- Always consult your dealer if you have any doubts.
- The following maintenance instructions are based on normal use. At intensive use or use at extreme circumstances the maintenance intervals should be shortened.

Regularly

Cleaning

The brush part should be cleaned regularly using a high pressure cleaner or similar. Always remove the brush part from the motor drive before cleaning, according to section Brush cylinder replacement.

Note! The motor unit is IP55 protected and does not withstand high pressure cleaning.

Weekly

- Check the gearbox for oil leakage.
- If leaking please contact your DeLaval dealer, the gear box should immediately be replaced.





Once a year

It is recommended that yearly do a service and change oil and brush cylinder on the DeLaval swinging cow brush to maintain its performance.



Oil change

To change oil, unscrew the oil plug and put the drive horizontal with the drain hole upwards and let the oil drain into a collecting container. Put the drive horizontal with the drain hole up and refill with 150cm³ of swinging cow brush gearbox oil, 91526255 , and then screw the plug back.



Brush cylinder replacement

The brush need to be replaced, under normal use, once a year or when it is worn out.

- If the bolt is locked by Loctite: Heat it up gently with a gas burner and unscrew it.



Caution! Take care not to set fire to the bristles.

- Remove the bottom plate and the old brush cylinder.
-Fit the brush unit 91526242 to the axle.
- Re-fit the bottom plate and the bolt. With the upgraded bottom plate kit, 91526254 , no Loctite is needed.

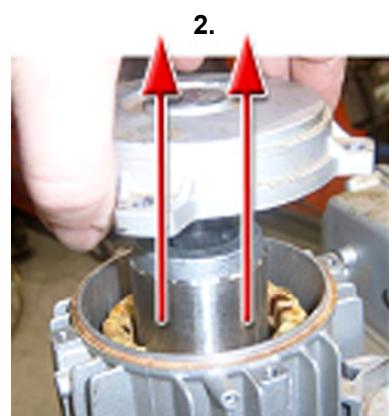
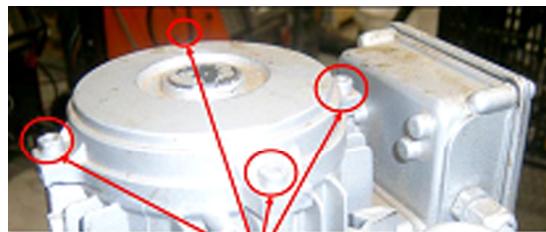


Top bearing change

Note! Only for the first generation of swinging cow brush.

If the motor gets blocked, follow the instructions below.

1. Unscrew the cover of the motor



2. Pull the cover with anchor out of the motor.

- Test if the bearing is the issue. When you can not turn the anchor the bearing in the top of the motor is stuck. If you can turn the anchor you should replace the whole cow brush motor.



3. Remove the security ring from the cover.



DeLaval swinging cow brush

Maintenance



4.

Remove the old bearing with a puller.
Assemble the new bearing, 91526256 , and
take all the steps above in reverse
sequence.



Troubleshooting

DeLaval swinging cow brush

Troubleshooting

Problem	Cause	Solution
Brush does not turn	Mains not connected or no voltage	Check fuse
	Plug is removed from the wall socket	Plug in the wall socket
	Brush mechanically blocked	Clean shaft and brush
Brush does not switch off	Printed circuit board does not switch off	Contact your DeLaval dealer
Brush makes strange noise	Flywheel loose	Contact your DeLaval dealer
	Bearing or gearwheel problem	Contact your DeLaval dealer
Brushshaft falling down	Completely broken outgoing axle	Contact your DeLaval dealer
	Broken Loctite connection	See service news - 845
	Partly broken outgoing axle	See service news - 845



DeLaval swinging cow brush

Troubleshooting

DeLaval
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SE-147 21 Tumba
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www.delaval.com